Evaluative Research on AHP-based Blue Economic Zone Human Resource Plan Dynamic Capability

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ABSTRACT
Human resource planning and construction, is related to the construction and development fundamental problems of blue economic zone. This article selects the AHP method, and constructs dynamic capability evaluation index system of blue economic zone human resource planning, which helps diagnose their human resource planning dynamic capabilities, and finds out the key factors affecting the ability, thus science formulation and implementation human resource planning, realize the human resources and other effective resource allocation, to enhance the competitiveness of the blue economic zone.

Keywords
Blue Economic Zone; Human Resource Plan; Dynamic Capability; AHP

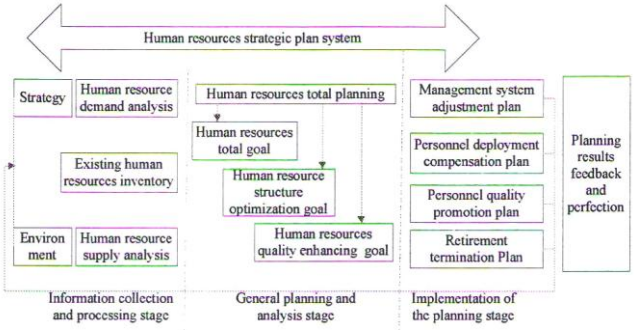
1. INTRODUCTION
P.R .Lawrence and J.W .Lorsch put forward the concept of "Integrative Capabilities" in 1976. R.H Anderson and I.Cockburn divided organization ability into Component Competence and Architectural Competence two types. In addition, J.C .Spender proposed "Collective Knowledge" and R.Nelson put forward "Organizational Architecture" concepts, which had more or less similarities with dynamic capabilities.

Based on the above background, Teece, Pisano and Shuen first proposed the theoretical framework of "Dynamic Capability", which was used to explain how to sustainable competitive advantage in dynamic environment. It broke "core rigidity" problem of existing core competencies in the organization, and introduced time and dynamic to capabilities and strategic management research. The emergence of dynamic capabilities adapt to changes in the environment, so that capacity building, sustainable use and update have become a dynamic process, which have the important meaning for the establishment of sustainable competitive advantage.

2. DYNAMIC CAPABILITY AND HUMAN RESOURCE PLAN

2.1 Dynamic Capability
Dynamic capability is the organization unceasing conformity, reconfiguring and update resources, to create own ability behavior orientation [1]. The key is upgrading and transformation, its core is coping with a constantly changing environment, to reach and maintain competitive advantage.
Dynamic capabilities research object could be selected from two perspectives: (1) the overall perspective and specific areas of organizational. In reality, few organizations can have all required to run the ability and resources, and through integration using achieve integral of sustainable competitive advantage [2]. Excellent organizations often have integrated relevant strength and resources from the organization's ability in one or more fields. (2) dynamic capability in different organizational level shows differences, especially in accordance with the strategic organization level division of company level, strategic business units and functional departments and three levels of dynamic capabilities characteristics will show much difference.

2.2 Human Resource Plan
Since 1970s, human resource plan has become the important function of human resource management and to the organization's personnel policies as a whole. In the traditional personnel management, human resource plan only static information collection and relevant personnel policy setting. This static concept was extremely not adapted with dynamic market demand and talents of their own development needs. Human resources plan is not static result, but the dynamic management process [3]. Its compilation basis and implement environment is dynamic. The goal of human resources plan is to organizations provide sufficient human resources guarantee, and it is a real-time management, is not a static thing. The relevant management measures of human resources plan are to organize daily management of the important component. Human resources strategic plan process is shown as figure 1.



2.3 Human Resource Plan Dynamic Capability
Human Resource Plan Dynamic Capability theory connected human resource plan and strategic dynamic development, and

describes improving the development of function of human resources plan from the perspective of different, then in a dynamic environment to play a servant of human resources post with the greatest potential to achieve benefits optimization [4]. Dynamic human resources plan is effective to enhance the competitiveness, in accordance with strategic planning for human resources development and deployment of dynamic personnel, maximize the role of human resources, which will effectively protect the sustainability of competitive advantage.

3. HUMAN RESOURCES PLAN DYNAMIC CAPACITY EVALUATION DIMENSION CONSTRUCTION

Human resources are the most complicated and vigorous resources internal organizational. Human resource plan should include each function modules, so that give full play to the advantages of human resources to match the strategy [5]. This article attempts from the following 5 dimensions on human resource plan dynamic capability is discussed according to this establish evaluation index system, such as shown in Table-I.

Table 1. Human Resource Planning Dynamic Capability Evaluation Index System

Target layer A	Criterion layer B	Index layer C
Human resource planning dynamic capability A	Environmental insight and strategic positioning B1	Regional external macro-environment C11
		Regional internal environment C12
		Accurate positioning of human resources plan strategy C13
	Human resources inventory B2	Depth C21
		Span C22
		Frequency C23
		Accuracy C24
	Dynamic coordination of business functions B3	Recruitment C31
		Training C32
		Salary and welfare C33
		Career planning C34
		Rational flow C35
	The maturity of human resources information system B4	Perfect function C41
		Accurate results C42
		Simple operation C43
		Good performance C44
	System guarantee B5	System perfecting C5

4. AHP BASIC PRINCIPLE AND APPLICATION

4.1 AHP Introduction

Saaty (1980) first introduced AHP as a new approach to dealing with complex economic, technological, and sociopolitical problems, which often involve a great deal of uncertainty [6]. Saaty put forward a simple, flexible and practical method of multiple criteria decision making, which according to the nature and objectives to be achieved by decomposition The components of a problem, according to the relationship between factors that will factor hierarchy to form a hierarchical structure model, and then by layer analysis and, ultimately, the highest level for the lowest factors (total goals) of the importance weights. AHP is especially suitable for accurate decision-making results difficult to measure directly the occasion. It can be roughly divided into four steps.

1) The establishment of the hierarchy model. In-depth analysis of problems faced, the factors contained in the problem is divided into different levels, such as target layer, criterion layer, index layer, the program layer

2) Determine the judgment matrix. The value of the judgment matrix reflects the people's understanding of the relative importance of each elements factor, when compared with each other the importance of factors of practical significance to the ratio with the note to determine the appropriate value of the element matrix can take this ratio. Scale methods using 1-9 and its inverted number.

3) The judgment matrix is a human given, so the needs of consistency test, the reliability of the evaluation judgment matrix. Consistency of judgment matrix are as the following steps:

a) Calculation consistency index CI , CI = (λmax − *n*) / (*n* −1)

b) Find the corresponding average random consistency index RI. To n=1,□,9, the value of RI as shown as table 2.

Table 2. Stochastic Ri Values

N	1	2	3	4	5	6	7	8	9
RI	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45

c) Calculation consistency ratio CR, CR=CI/RI. When CR<0.10, judgment matrix consistency is acceptable, otherwise deal with judgment matrix make appropriate correction.

4) Calculation of each layer factors of the system, and the combination of weight sorting.

4.2 *Application of evaluation model of AHP-based Human resource planning dynamic capability*

Step 1: According to major factors affect human resource plan dynamic capabilities, establishing system's hierarchical structure.

Step 2: Using Delphi method, consult relevant experts to assist tectonic judgment matrix. According to the judgment matrix in mathematics features, calculates the matrix factors relative in order of importance values. As shown in table 3.

Table 3. The Relative Importance Of Each Factor Matrix

Index	Weight	Index	Weight
B1	0.0374	C11	0.2832
		C12	0.3337
		C13	0.3831
B2	0.4120	C21	0.0861
		C22	0.5065
		C23	0.2651
		C24	0.1424
B3	0.317851	C31	0.0440
		C32	0.4466
		C33	0.2586
		C34	0.2068
		C35	0.0440
B4	0.0857	C41	0.2447
		C42	0.6067
		C43	0.0480
		C44	0.1006
B5	0.1470	C5	0.1470

Step 3: the matrix CR values were 0.0323, 0.0332, 0.0078, 0.0724, 0.0324, less than 0.1, all through the consistency test.

Step 4: with the data obtained from step 2 as a human resource plan dynamic capability evaluation system of weights.

5. EMPIRICAL ANALYSIS

Human resources are the primary resources. Promote Blue Economic Zone rising to build talent strategy highlands, to strengthen the human resources project importance and urgency of understanding of the development plan to accelerate the implementation, achieving a province strong in talents, which has become major strategic problems in Blue Economic Zone.

Blue Economic Zone system scope is within the scope of south to Rizhao City, north to binzhou city, including Qingdao, yantai, weihai, weifang, Rizhao, binzhou and dongying. According to the investigation, 500 questionnaires were issued, all recycling, including valid questionnaires 428 copies, valid questionnaires rate 75.6%. Analysis and research results are shown in table IV.

Index		Index Fuzzy Evaluation				Score	Weight	Total Score
		Excellent 1	good 0.8	General 0.5	Poor 0.2			
Environmental insight and strategic positioning	Regional external macro-environment	0.1	0.35	0.35	0.2	0.595	0.1047	0.4903
	Regional internal environment	0	0.4	0.3	0.3	0.53	0.6370	
	Accurate positioning of human resources plan strategy	0	0	0.5	0.5	0.35	0.2583	
Human resources inventory	Depth	1	0	0	0	1	0.0860	0.8086
	Span	0	0.5	0.5	0	0.65	0.5065	
	Frequency	1	0	0	0	1	0.2651	
	Accuracy	0.5	0.5	0	0	0.9	0.1424	
Dynamic coordination of business functions	Recruitment	0	0	1	0	0.5	0.0440	0.4441
	Training	0	0	0.5	0.5	0.35	0.4466	
	Salary and welfare	0	0.8	0.2	0	0.74	0.2586	
	Career planning	0	0	0.2	0.8	0.26	0.2068	
	Rational flow	0	0.25	0.4	0.35	0.47	0.0440	
The maturity of human resources information system	Perfect function	0	0.15	0.35	0.5	0.395	0.2447	0.5899
	Accurate results	0	0.5	0.5	0	0.65	0.6067	
	Simple operation	0.5	0.3	0.2	0	0.75	0.0480	
	Good performance	0.1	0.4	0.35	0.15	0.625	0.1006	
System guarantee	System perfecting	0	0.55	0.25	0.2	0.619	1	0.6190

Comprehensive data above, it is concluded that the selected real sample human resource plan dynamic ability level as shown in table V.

Table 5. Blue Economic Zone Human Resource Plan Dynamic Capability Evaluation Results

Judging from the empirical data, Shandong Blue Economic Zone human resource plan dynamic abilities total score is 0.6342, in the medium level. From secondary indexes, the highest scoring is Human resources inventory of 0.8086, evaluation good; the maturity of human resources information system and system guarantee of scoring close, in a general level, environmental insight and strategic positioning and dynamic coordination of business functions is the worst. The human resources administration departments in government may depend on the targeted improvement of management.

Index	Weight	Score	Evaluation
Environmental insight and strategic positioning	0.0374	0.4903	General
Human resources inventory	0.4120	0.8086	Good
Dynamic coordination of business functions	0.3179	0.4441	General
The maturity of human resources information system	0.0857	0.5899	General
System guarantee	0.1470	0.6190	General
Total Score	0.6342		General

6. CONCLUSION

In this paper, based on the theory AHP established a set of systematic human resource plan dynamic capability evaluation index system, by which Shandong Blue Economic Zone human resource plan level was evaluated. Through the analysis of the evaluation result, according to each index factors to find out the cause, adopting the specific measures to improve, adjust the emphases, regarding the question indexes of management, in real operation, realize dynamic adjustment high level of human resource plan.

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